

Sandia National Laboratories

Albuquerque, New Mexico 87185

DOE review completed.

April 8, 1985

Mr. Robert A. O'Brien, Director  
Office of Safeguards and Security  
DP-34  
U.S. Department of Energy  
Washington, DC 20545

Dear Rob:

We have reviewed the terrorist vehicle barrier information from Berg and Associates and several comments seem appropriate:

- (a) The technical data is very limited. The sketches show no beam sizes or cable diameters and the lifting mechanism details are lacking. Therefore, it is not possible to even grossly estimate barrier effectiveness, potential maintenance requirements and other important vehicle barrier performance parameters.
- (b) We know of several "pop-up" type active barriers that appear to be as effective in stopping vehicles and cost approximately one half as much as the barrier described in the enclosed literature. These include designs by Delta Scientific, Frontier, Babcock and Wilcox and a Sandia design. The Delta, Frontier and Sandia barriers have been tested and reports provided your office.
- (c) Several other concepts for vehicle barriers have been evaluated and appear to be in the same state of definition as the one in this literature.

Our program has attempted to comparatively evaluate each potential barrier relative to cost, effectiveness, design completeness, operational characteristics, maintenance and availability. In addition we have attempted to understand vehicle barriers from a systems viewpoint at DOE sites. Limited testing has been conducted on those barriers that appeared to have a good "match" to system applications and additional data was needed to assure our recommendations were based on sound technical judgement.

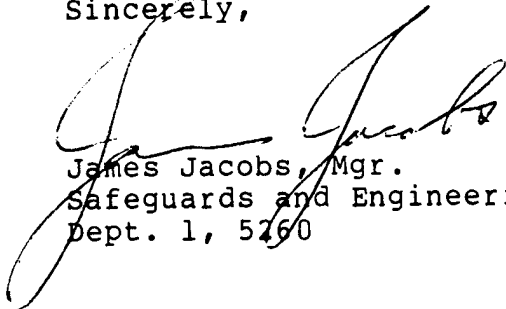
Vehicle Barrier Info

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At this time, the limited technical information from Berg and Associates and potential DOE usage does not support the cost of obtaining a prototype vehicle barrier from Berg and Associates for test/evaluation at Sandia. However, we would be pleased to review their prototype design, available test data and detailed design information. Based on our experience and test evaluations, appropriate comments would be offered through your office.

Sincerely,



James Jacobs, Mgr.  
Safeguards and Engineering  
Dept. 1, 5260

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